

Second-hand Smoke is Toxic to Children

Breathing environmental tobacco smoke (ETS) can be harmful to children's health. The problems associated with exposure to ETS can include asthma, Sudden Infant Death Syndrome (SIDS), bronchitis, pneumonia and ear infections.

The developing lungs of young children are severely affected by exposure to ETS for several reasons, including that children are still developing physically, have higher breathing rates than adults, and have little control over their indoor environments. Children receiving high doses of ETS, such as those with smoking mothers, run the greatest risk of damaging health effects.

Children with asthma are especially at risk. The Environmental Protection Agency (EPA) estimates that exposure to second-hand smoke increases the number of episodes and severity of symptoms in 200,000 to 1,000,000 children with asthma. Moreover, ETS is a risk factor for new cases of asthma in children who have not previously exhibited asthma symptoms. The means by which ETS triggers an asthma episode is believed to be through its irritancy effects. That is, smoke irritates the chronically inflamed bronchial passages of asthmatics. Other asthma triggers, such as dust mites and pet dander, trigger asthma episodes through allergenic effects.

Infants and young children whose parents smoke are also at increased risk of lower respiratory tract infections, such as pneumonia and bronchitis. The EPA estimates that second-hand smoke is responsible for between 150,000 and 300,000 lower respiratory tract infections in infants and children under 18 months of age, resulting in between 7,500 and 15,000 hospitalizations each year. These children are also more likely to have reduced lung function and symptoms of respiratory irritation such as cough, excess phlegm and wheeze.

Younger children, aged four to six, are the most vulnerable to developing health problems from exposure to ETS. The reason is that younger children are at home and typically around adults more than older children. A study by the Centers for Disease Control found that the incidence and severity of asthma and wheezing was as high in children whose mothers did not smoke during their pregnancies but smoked afterwards as it was in those whose mothers smoked during their pregnancies.

Things You Should Know About ETS

- Environmental tobacco smoke (ETS) is a mix of more than 4,000 compounds, over fifty of which are known to cause cancer.
- ETS consists of two different kinds of smoke. Approximately 85% is **sidestream** smoke emitted from the burning cigarette, cigar or pipe between puffs. The remainder is the **mainstream** smoke exhaled by the smoker.
- Although mainstream and sidestream smoke are chemically very similar, undiluted sidestream smoke burns at a lower temperature and, therefore, contains higher concentrations of many toxic elements in tobacco smoke, including nicotine, carbon monoxide, benzene, ammonia, aminobiphenyl and benzo[a]pyrene.

- In 1992, the Environmental Protection Agency classified ETS as a “Group A” carcinogen—a substance that produces cancer in humans.

ETS Health Effects on Children

ETS from parental smoking can cause children to suffer the following health effects:

- Pregnant women who smoke and nonsmoking pregnant women exposed daily to tobacco smoke are more likely to have low birth weight babies at risk for death and disease in infancy and during childhood.
- Nursing mothers who smoke can pass along harmful chemicals from cigarettes to their babies in their breast milk.
- It is estimated that more than one-third (35%) of all deaths from Sudden Infant Death Syndrome (SIDS) are due to maternal tobacco use. Children in the United States are three times more likely to die from SIDS caused by maternal smoking than die from homicide or child abuse.
- Children of parents who smoke have a higher prevalence of symptoms of respiratory irritation such as cough, phlegm and wheeze.
- An estimated 1.67 million physician visits for cough each year in the United States are due to involuntary smoking.
- Exposure to ETS substantially increases the risk of lower respiratory tract infections, and is responsible for an estimated 350,000 cases of bronchitis and 152,000 cases of pneumonia (16% of all lung infections in U. S. children under the age of five).
- Involuntary exposure to tobacco smoke is responsible for an estimated 1.2 million ear infections each year in the United States (approximately 7% of the total).
- Children exposed to household smoking are at greater risk of requiring surgery for recurrent infections or tonsillitis; an estimated 86,000 tube insertions (14% of the total) and 18,000 tonsillectomies/adenoidectomies (removal of the tonsils or adenoids – 20% of the total).
- ETS exposure is associated with higher risk of developing asthma and more frequent and severe asthma attacks in children who already have the disease. Each year in the United States, an estimated 11% of all asthma cases and more than half a million physician visits for asthma are due to smoking in the home.
- Exposure to the smoking of one or both parents has also been shown to be a highly important predictor of smoking among adolescents.
- It is difficult to measure the exposure of nonsmokers to ETS. Smoking in confined spaces, smoking in an enclosed room or a car, can greatly increase concentrations of ETS.
- It takes **more than three hours** to remove 95% of the smoke from one cigarette from the room once smoking has ended.
- In general terms, most adults (87%) believe people have a right to be free from breathing other people’s second-hand smoke.
- Parents who restrict smoking to the outdoors are more likely to be highly educated, older, come from non-smoking households, and have higher incomes.

- Courts in Canada, the United States, and Australia have begun to consider parental smoking one of the factors that must be weighed in assessing “the best interest” of the child in custody and visitation proceedings.

Protecting Children from Second-hand Smoke

A few basic actions can protect children from second-hand smoke:

- Choose not to smoke in your home and car and do not allow family and visitors to do so. Infants and toddlers are especially vulnerable to the health risks from ETS.
- Do not allow childcare providers or others who work in your home to smoke.
- **Until you can quit, choose to smoke outside.** Moving to another room or opening a window is not enough to protect your children.

Adapted from the American Academy of Pediatrics, the Centers for Disease Control and the United States Environmental Protection Agency.